THE AMERICAN JOURNAL OF PSYCHOLOGY

EDITED BY

KARL M. DALLENBACH
University of Texas

WITH THE COÖPERATION OF

E. G. BORING, Harvard University; M. E. BITTERMAN, University of Texas; S. W. FERNBERGER, University of Pennsylvania; J. P. GUILFORD, University of Southern California; HARRY HELSON, University of Texas; E. R. HILGARD, Stanford University; W. S. HUNTER, Brown University; H. M. JOHNSON, Tulane University; G. L. KREEZER, Washington University; D. G. MARQUIS, University of Michigan; R. M. OGDEN, Cornell University; W. B. PILLSBURY, University of Michigan

Vol. LXVI
MEZES HALL, THE UNIVERSITY OF TEXAS
AUSTIN, TEXAS
1953

COPYRIGHT, 1953
BY
KARL M. DALLENBACH

TABLE OF CONTENTS

Articles and Notes

ALLEN, H. E., and MERRYMAN, J. G., An Improved Electronic Tachistoscope 110
AMMONS, C. H., WORCHEL, P., and DALLENBACH, K. M., "Facial Vision": The Perception of Obstacles Out of Doors by Blindfolded and Blindfolded-Deafened Subjects 519
ARMINGTON, J. C., A Note Concerning the VEG Scale of Apparent Weight 304
ARNHEIM, R., David Katz: 1884-1953 638
BACHEM, A., The Color of Ultraviolet Light 251
BAKER, L. M., and TAYLOR, W. M., An Apparatus for Recording Changes in Skin-Temperature 124
BALDWIN, A., BROWN, R. H., and CONKLIN, J. E., Apparatus for Measuring the Threshold for Visual Discrimination of Direction of Movement 289
BEVAN, W., and DUKES, W. F., Color as a Variable in the Judgment of Size 283
BEVAN, W., and RIOPELLE, A. J., The Distribution of Scotopic Sensitivity in Human Vision 73
BILODEAU, E. A., Speed of Acquiring a Simple Motor Response as a Function of the Systematic Transformation of Knowledge of Results 409
BILODEAU, E. A., and FERGUSON, T. G., A Device for Presenting Knowledge of Results as a Variable Function of the Magnitude of Response 483
BITTERMAN, M. E., and ELAM, C. B., The Effect of an Irrelevant Relation on Discriminative Learning 242
BITTERMAN, M. E., FEDDERSEN, W. E., and TYLER, D. W., Secondary Reinforcement and the Discrimination Hypothesis 456
BITTERMAN, M. E., TYLER, D. W., and WORTZ, E. C., The Effect of Random and Alternating Partial Reinforcement on Resistance to Extinction in the Rat 57
BITTERMAN, M. E., and WODINSKY, J., The Solution of Oddity-Problems by the Rat 137
BITTERMAN, M. E., and WORCHEL, P., The Phenomenal Vertical and Horizontal in Blind and Sighted Subjects 598
BITTERMAN, M. E., and WORTZ, E. C., On the Effect of an Irrelevant Relation 491
BLACKWELL, H. R., Evaluation of the Neural Quantum Theory in Vision 397
BORING, E. G., John Dewey: 1859-1952 145
BORING, E. G., The Rôle of Theory in Experimental Psychology 169
BORING, E. G., The 1953 Meeting of the American Philosophical Society .. 502
BORING, E. G., The 1953 Meeting of the National Academy of Sciences 501
BRENNER, M. W., Continuous Stimulation and Apparent Movement 494
BRIGGS, G. E., and BROGDEN, W. J., Bilateral Aspects of the Trigonometric Relationship of Precision and Angle of Linear Pursuit-Movements 472
BROGDEN, W. J., The Trigonometric Relationship of Precision and Angle of Linear Pursuit-Movement as a Function of Amount of Practice 45
BROGDEN, W. J., Forty-Ninth Meeting of the Society of Experimental Psychologists 497
BROGDEN, W. J., and BRIGGS, G. E., Bilateral Aspects of the Trigonometric Relationship of Precision and Angle of Linear Pursuit-Movements 472
BROWN, D. R., Stimulus-Similarity and the Anchoring of Subjective Scales .. 199
BROWN, K. T., Methodology for Studying Figural After-Effects and Practice Effects in the Müller-Lyer Illusion 629
BROWN, R. H., BALDWIN, A., and CONKLIN, J. E., Apparatus for Measuring the Threshold for Visual Discrimination of Direction of Movement 289

BRUNSWIK, E., and KAMIYA, J., Ecological Cue-Validity of 'Proximity' and of Other Gestalt Factors 20
BURNHAM, R. W., Bezold's Color-Mixture Effect 377
BURTON, N. G., and DALLENBACH, K. M., The Duration of the After-Sensations of Warmth Aroused by Punctiform Stimulation 386
CARPER, J. W., A Comparison of the Reinforcing Value of a Nutritive and a Non-Nutritive Substance Under Conditions of Specific and General Hunger 270
CARPER, J. W., and POLLIARD, F., A Comparison of the Intake of Glucose and Saccharin Solutions Under Conditions of Caloric Need 479
CHALMERS, E. L., The Rôle of Brightness in Primary Size-Distance Perception 584
CHOW, K. L., Stimulus-Characteristics and Rate of Learning Visual Discriminations by Experimentally Naive Monkeys 278
CHRISTMAN, R. J., Figural After-Effects Utilizing Apparent Movement as Inspection-Figure 66
CIBIS, P. A., and GERATHEWOHL, S. J., The Space Between Distinct Contours 436
CONKLIN, J. E., BALDWIN, A., and BROWN, R. H., Apparatus for Measuring the Threshold for Visual Discrimination of Direction of Movement 289
CRAIG, E. A., and LICHTENSTEIN, M., Visibility-Invisibility Cycles as a Function of Stimulus-Orientation 554
CRONBACH, L. J., Twenty-Fifth Annual Meeting of the Midwestern Psychological Association 498
DALLENBACH, K. M., The Psychological Laboratory of The University of Texas 90
DALLENBACH, K. M., Errata 145, 502, 638
DALLENBACH, K. M., The Elastic Effect: An Optical Illusion of Expansion 634
DALLENBACH, K. M., AMMONS, C. H., and WORCHEL, P., "Facial Vision": The Perception of Obstacles Out of Doors by Blindfolded and Blindfolded-Deafened Subjects 519
DALLENBACH, K. M., and BURTON, N. G., The Duration of the After-Sensations of Warmth Aroused by Punctiform Stimulation 386
DENENBERG, V. H., A Simplified Method of Measuring Kinesthetic Reaction-Times 309
DUKES, W. F., and BEVAN, W., Color as a Variable in the Judgment of Size 283
DU MAS, F. M., A New Visual Illusion 142
EDWARDS, W., Probability-Preferences in Gambling 349
EDWARDS, W., Apparent Size of After-Images Under Conditions of Reduction 449
ELAM, C. B., and BITTERMAN, M. E., The Effect of an Irrelevant Relation on Discriminative Learning 242
ELIASBERG, W. G., Richard Maria Pauli: 1886-1951 647
FEDDERSEN, W. E., BITTERMAN, M. E., and TYLER, D. W., Secondary Reinforcement and the Discrimination Hypothesis 456
FERGUSON, T. G., and BILODEAU, E. A., A Device for Presenting Knowledge of Results as a Variable Function of the Magnitude of the Response 483
FLANDERS, N. A., A Circuit for the Continuous Measurement of Palmer Resistance 295
GELDARD, F. A., Military Science: Science or Technology? 335
GERATHEWOHL, S. J., and CIBIS, P. A., The Space Between Distinct Contours 436
GOLDMAN, A. E., Studies in Vicariousness: Degree of Motor Activity and the Autokinetic Phenomenon 613
GREEN, E. H., Apparatus for Auditory Masking 115
GREEN, E. J., Stimulus Control of Operant Responding in the Pigeon 311
HARCUM, E. R., Verbal Transfer of Overlearned Forward and Backward Associations 622
HARPER, R. S., The Perceptual Modification of Colored Figures 86
HARRIMAN, A. E., and MACLEOD, R. B., Discriminative Thresholds of Salt for Normal and Adrenalectomized Rats 465
HEISE, G. A., Auditory Thresholds in the Pigeon 1
HOVLAND, C. I., A Set of Flower Designs for Experiments in Concept-Formation 140

HUMPHREY, C. E., A Simplified Stimulus-Generator 122
HUMPHREY, C. E., and THOMPSON, J. E., A Stable Apparatus for Analyzing the Area of Polygraphic Curves 118
JONES, F. N., A Test of the Validity of the Elsberg Method of Olfactometry 81
KAMIYA, J., and BRUNSWIK, E., Ecological Cue-Validity of 'Proximity' and of Other Gestalt Factors 20
KARLIN, L., The Time-Error for Visual Size Comparison 564
KENSHALO, D. R., An Electrical Latch Relay: A Substitute for Mechanical Latch Relays 299
KILBY, R., Thirty-Third Annual Meeting of the Western Psychological Association 637
KLOPFER, F. D., A Semi-Automatic Bright-Field Tachistoscope 105
KRUS, D. M., WAPNER, S., and WERNER, H., Studies in Vicariousness: Motor Activity and Perceived Movement 603
LACEY, O. L., Forty-Fifth Annual Meeting of the Southern Society for Philosophy and Psychology 498
LANE, G., Twenty-Fourth Annual Meeting of the Eastern Psychological Association 499
LICHTENSTEIN, M., and CRAIG, E. A., Visibility-Invisibility Cycles as a Function of Stimulus Orientation 554
LIVSON, N. H., After-Effects of Prolonged Inspection of Apparent Movement 365
MACLEOD, R. B., and HARRIMAN, A. E., Discriminative Thresholds of Salt for Normal and Adrenalectomized Rats 465
MCHUGH, R. B., The Comparison of Two Correlated Sample Variances 314
MERRYMAN, J. G., and ALLEN, H. E., An Improved Electronic Tachistoscope 110
MEYER, M. F., Crucial Experiments in Cochlear Mechanics 261
MEYER, M. F., The Traditional Formulas for Pitches Created in the Cochlea 306
MONTGOMERY, K. C., Concerning the Use of Analysis of Variance on Latency Data 131
NACHMIAS, J., Figural After-Effects in Kinesthetic Space 609
NEIMARK, E., and SALTZMAN, I. J., Intentional and Incidental Learning With Different Rates 618
NEWHALL, S. M., Relation of the Rayleigh Ratio to Color-Temperature 135
OZKAPTAN, H., and SIEGEL, A. I., Manipulative Completion of Bisected Geometrical Forms by Nursery School Children 626
PETERS, W., Karl Marbe: 1869-1953 645
POLLACK, I., Assimilation of Sequentially Encoded Information 421
POLLIARD, F., and CARPER, J. W., A Comparison of the Intake of Glucose and Saccharin Solutions Under Conditions of Caloric Need 479
REVERS, W. J., Gustav Kafka: 1883-1953 642
RIOPELLE, A. J., and BEVAN, W., The Distribution of Scotopic Sensitivity in Human Vision 73
ROGERS, L. S., Twenty-Third Annual Meeting of the Rocky Mountain Branch of the American Psychological Association 500
ROSS, S., and VERSACE, J., The Critical Frequency for Taste 496
SALTZMAN, I. J., The Orienting Task in Incidental and Intentional Learning 593
SALTZMAN, I. J., and NEIMARK, E., Intentional and Incidental Learning With Different Rates of Stimulus-Presentation 618
SANFORD, F. H., Sixtieth Annual Meeting of the American Psychological Association 143
SENDERS, V. L., Further Analysis of Response Sequences in the Setting of a Psychophysical Experiment 215
SIEGEL, A. I., A Motor Hypothesis of Perceptual Development 301
SIEGEL, A. I., and OZKAPTAN, H., Manipulative Completion of Bisected Geometrical Forms by Nursery School Children 626
SIMMEL, M. L., The Coin Problem: A Study in Thinking 229
SLACK, C. W., Learning in Simple One-Dimensional Tracking 33
SMITH, W. M., Apparent Size in Stereoscopic Movies 488

SPROWLS, R. C., Psychological-Mathematical Probability in Relationships of Lottery Gambles 126
STROMBERG, E. J., A Demonstration of 'Subjective' Colors on Television 636
SWEET, A. L., Temporal Discrimination by the Human Eye 185
TAYLOR, W. M., and BAKER, L. M., An Apparatus for Recording Changes in Skin-Temperature 124
THOMPSON, J. E., and HUMPHREY, C. E., A Stable Apparatus for Analyzing the Area of Polygraphic Curves 118
TYLER, D. W., BITTERMAN, M. E., and FEDDERSEN, W. E., Secondary Reinforcement and the Discrimination Hypothesis 456
TYLER, D. W., BITTERMAN, M. E., and WORTZ, E. C., The Effect of Random and Alternating Partial Reinforcement on Resistance to Extinction in the Rat 57
VANDERPLAS, J. M., Frequency of Experience versus Organization as Determinants of Visual Thresholds 574
VERSACE, J., and ROSS, S., The Critical Frequency for Taste 496
WAPNER, S., KRUS, D. M., and WERNER, H., Studies in Vicariousness: Motor Activity and Perceived Movement 603
WERNER, H., KRUS, D. M., and WAPNER, S., Studies in Vicariousness: Motor Activity and Perceived Movement 603
WICKENS, D. D., The 1952 Meeting of Section I, AAAS 315
WILLIAMS, D. C., Eleventh Annual Meeting of the Canadian Psychological Association 144
WODINSKY, J., and BITTERMAN, M. E., The Solution of Oddity-Problems by the Rat 137
WORCHEL, P., AMMONS, C. H., and DALLENBACH, K. M., "Facial Vision": The Perception of Obstacles Out of Doors by Blindfolded and Blindfolded-Deafened Subjects 519
WORCHELL, P., and BITTERMAN, M. E., The Phenomenal Vertical and Horizontal in Blind and Sighted Subjects 598
WORTZ, E. C., and BITTERMAN, M. E., On the Effect of an Irrelevant Relation 491
WORTZ, E. C., BITTERMAN, M. E., and TYLER, D. W., The Effect of Random and Alternating Partial Reinforcement on Resistance to Extinction in the Rat 57
YOUNG, P. T., Differential Color-Mixers 312

BOOK REVIEWS

(The reviewer's name appears in parentheses after the title of the work.)

AHLENSTIEL, H., Rotgrünblindheit als Erlebnis: Ein Führer durch die Farbwelt für Rot-Grün Blinde (E. Murray) 319
ANDERSON, G. L., and ANDERSON, H. H., An Introduction to Projective Techniques (L. Phillips) 672
BALLANTINE, F. A., MORSE, W. C., and DIXON, W. R., Studies in the Psychology of Reading (M. A. Tinker) 671
BAUER, R. A., The New Man in Soviet Psychology (M. L. Simmel) 658
BECK, F., and GODIN, W., Russian Purge and the Extraction of Confession (M. Bentley) 334
BROWN, G. B., Science: Its Method and Its Philosophy (E. L. Saldanha) ... 163
BUYTENDIJK, F. J. J., De la Douleur (R. S. Harper) 517
BUYTENDIJK, F. J. J., Phénoménologie de la Rencontre (R. B. MacLeod) .. 674
CAMERON, N., and MAGARET, A., Behavior Pathology (L. W. Crafts) 321
CANTOR, A. J., A Handbook of Psychosomatic Medicine; With Particular Reference to Intestinal Disorders (J. I. Lacey) 513
CARTWRIGHT, D., Editor, Lewin's Field Theory in Social Science (R. L. French) 324
DENNIS, W., Editor, Current Trends in the Relation of Psychology to Medicine (G. K. Yacorzynski) 514

DIXON, W. R., BALLANTINE, F. A., and MORSE, W. C., Studies in the Psychology of Reading (M. A. Tinker) 671
ENGLISH, H. B., Child Psychology (S. W. Bijou) 510
FARIS, R. E. L., Social Psychology (G. E. Swanson) 665
FISKE, D. W., and KELLY, E. L., The Prediction of Performance in Clinical Psychology (O. H. Mowrer) 326
FLUGEL, J. C., A Hundred Years of Psychology: 1833-1933, With Additional Part on Developments 1933-1947 (E. G. Boring) 156
GEMELLI, A., La Strutturazione Psicologica Del Linguaggio Studiata Mediante L'Analisi Elettroacustica (C. V. Hudgins) 330
GODIN, W., and BECK, F. Russian Purge and the Extraction of Confession (M. Bentley) 334
GOODMAN, P., HEFFERLINE, R. F., and PERLS, F., Gestalt Therapy: Excitement and Growth in the Human Personality (A. S. Luchins) 165
GRAY, J. S., Psychology in Industry (C. H. Lawshe) 677
GUSDORF, G., Memoire et Personne (G. Dufresne) 514
HARROWER, M. R., and STEINER, M. E., Large Scale Rorschach Techniques (G. P. Wilson) 516
HAYES, C., The Ape in Our House (H. F. Harlow) 670
HEFFERLINE, R. F., GOODMAN, P., and PERLS, F., Gestalt Therapy: Excitement and Growth in the Human Personality (A. S. Luchins) 165
HOCH, P., and KALINOWSKY, L. B., Shock Treatment, Psychosurgery (H. E. Rosvold) 666
HOCH, P. H., and ZUBIN, J., Relation of Psychological Tests to Psychiatry (W. H. Holtzman) 517
HUMPHREY, G., Thinking: An Introduction to its Experimental Psychology (R. M. Ogden) 148
I. E. S., Lighting Handbook: The Standard Lighting Guide (M. E. Bitterman) 675
IRION, A. L., Editor, McGeoch's The Psychology of Human Learning (E. B. Newman) 658
JANIS, I. L., Air War and Emotional Stress (S. B. Sells) 515
JEFFRESS, L. A., Editor, Cerebral Mechanisms in Behavior (C. T. Morgan) .. 153
JUDD, D. B., Color in Business, Science and Industry (L. M. Hurvich) 663
KALINOWSKY, L. B., and HOCH, P. H., Shock Treatment, Psychosurgery (H. E. Rosvold) 666
KARWOSKI, T. F., and STAGNER, R., Psychology (F. L. Marcuse) 668
KELLY, E. L., and FISKE, D. W., The Prediction of Performance in Clinical Psychology (O. H. Mowrer) 326
KINGET, C. M., The Drawing Completion Test: A Projective Technique for the Investigation of Personality (J. P. Foley) 669
KISKER, G. W., Editor, World Tensions: The Psychopathology of International Relations (R. Stagner) 328
KOHLER, L., Über Aufbau und Wandlungen der Wahrnehmungswelt (E. G. Heinemann) 503
LEWIN, K. (Edited by CARTWRIGHT, D.), Field Theory in Social Science (R. L. French) 324
MAGARET, A., and CAMERON, N., Behavior Pathology (L. W. Crafts) 321
MCGEOCH, J. A., The Psychology of Human Learning, Revised by IRION, I., (E. B. Newman) 654
MEAD, M., VON FOERSTER, H., and TEUBER, H. L., Editors, Cybernetics: Circular Causal and Feedback Mechanisms in Biological and Social Systems, Transactions of the Eighth Conference (G. A. Miller) 661
MEILL, R., Lehrbuch der Psychologischen Diagnostik (M. L. Simmel) 512
METTLER, F. A., Editor, Psychosurgical Problems (H. E. Rosvold) 666
MORSE, W. C., BALLANTINE, F. A., and DIXON, W. R., Studies in the Psychology of Reading (M. A. Tinker) 671
MUKERJEE, R., The Dynamics of Morals (D. R. Brown and E. V. Schneider) 508

MUNN, N. L., Psychology: The Fundamentals of Human Adjustment (O. L. Zangwill) 316
MURPHY, G., An Introduction to Psychology (O. L. Zangwill) 316
PASCAL, G. R., and SUTTELL, B., The Bender-Gestalt Test (W. H. Holtzman) 517
PEAR, T. H., Editor, Psychological Factors of Peace and War (M. Sherif) 516
PERLS, F., GOODMAN, P., and HEFFERLINE, R. F., Gestalt Therapy: Excitement and Growth in the Human Personality (A. S. Luchins) 165
PIAGET, J., and INHELDER, B., Le Genèse de L'idée de Hasard chez L'enfant (I. Sigel) 677
PIÉRON, H., FAVERGE, J. M., PICHOT, P., and STOETZEL, J., Traité de Psychologie Appliquée: Vol. ii, Methodologie Psychotechnique (M. Bentley) 518
QUEENER, E. L., Introduction to Social Psychology (R. S. Harper) 674
RALL, E. P., Editor, Adrenal Cortex (M. Bentley) 672
RAPAPORT, D., Organization and Pathology (D. R. Miller) 505
REDL, F., and WATTENBERG, W. W., Mental Hygiene in Teaching (C. McGuire) 166
ROBACK, A. A., History of American Psychology (E. G. Boring) 651
ROHRBACHER, H., Einführung in die Psychologie (M. L. Simmel) 673
SCHNEIDERS, A. A., The Psychology of Adolescence (J. P. McKee) 333
SCHNEIDMANN, E. S., Thematic Test Analysis (L. Phillips) 672
SCHOLTZ, W., Die Kramfschaedigungen des Gehirns (C. de Csema) 515
SMITH, F. V., The Explanation of Human Behavior (K. F. Muenzinger)... 507
STAGNER, R., and KARWOSKI, T. F., Psychology (F. L. Marcuse) 668
STEINER, M. E., and HARROWER, M. R., Large Scale Rorschach Techniques (G. P. Wilson) 516
STONE, C. P., Editor, Comparative Psychology (H. Gleitman) 158
STONE, C. P., and TAYLOR, D. W., Editors, Annual Review of Psychology: Vol. 3 (L. Postman) 332
STRANG, R., An Introduction to Child Study (N. Bayley) 511
SUTTELL, B., and PASCAL, G. R., The Bender-Gestalt Test (W. H. Holtzman) 517
TAIT, E. F., Textbook of Refraction (J. J. Gibson) 678
TEUBER, H. L., MEAD, M., and VON FOERSTER, H., Editors, Cybernetics: Circular Causal and Feedback Mechanisms in Biological and Social Systems, Transactions of the Eighth Conference (G. A. Miller) 661
THOMPSON, G. G., Child Psychology (S. W. Bijou) 510
THURSTONE, L. L., Editor, Applications of Psychology (T. W. Harrell) .. 673
TOLMAN, E. C., Collected Papers in Psychology (M. E. Bitterman) 675
VAN BREDA, H. L., Editor, Problèmes Actuels de la Phénoménologie (R. B. MacLeod) 674
VON FOERSTER, H., MEAD, M., and TEUBER, H. L., Editors, Cybernetics: Circular Causal and Feedback Mechanisms in Biological and Social Systems, Transactions of the Eighth Conference (G. A. Miller) 661
WATTENBERG, W. W., and REDL, F., Mental Hygiene in Teaching (C. McGuire) 166
WELFORD, A. T., Skill and Age (R. S. Harper) 160
WINTERS, E. F., Editor, The Collected Papers of Adolph Meyer, Vol. IV. (M. Bentley) 678
YOUNG, J. Z., Doubt and Certainty in Science (R. S. Harper) 676
ZUBIN, J., and HOCH, P. H., Relation of Psychological Tests to Psychiatry (W. H. Holtzman) 517

INDEX

By H. W. STEVENSON, University of Texas

AUTHORS

(The names of authors of original articles are printed in CAPITALS; of authors of books reviewed, in roman; and of reviewers, in *italics*.)

Ahlenstiel, H. 319
ALLEN, H. E. 110
AMMONS, C. 519
Anderson, G. L. 672
Anderson, H. H. 672
ARMINGTON, J. C. ...304
ARNHEIM, R. 638

BACHEM, A. 251
BAKER, L. M. 124
BALDWIN, A. 289
Ballantine, F. A. 671
Bauer, R. A. 658
Bayley, N. 511
Beck, F. 334
Bentley, M. .....334, ...518, 672, 678
BEVAN, W. 73, 283
Bijou, S. W. 510
BILODEAU, E. A. 409 483
BITTERMAN, M. E. ...57, 137, 242, 456, 491, ...598
Bitterman, M. E. 675, 676
BLACKWELL, H. R. ..397
BORING, E. G. .....145, ...169, 501, 502
Boring, E. G. ..156, 651
BRENNER, M. W. 494
BRIGGS, G. E. 472
BROGDEN, W. J. .....45, ...472, 497
BROWN, D. R. 199
Brown, D. R. 508
Brown, G. B. 163
BROWN, K. T. 629
BROWN, R. H. 289
BRUNSWIK, E. 20
BURNHAM, R. W. ...377
BURTON, N. G. 386
Buytendijk, F. J. J. ..517 674

Cameron, N. 321
Cantor, A. J. 513
CARPER, J. W. ..270, 479
Cartwright, D. 324
CHALMERS, E. L. 584
CHOW, K. L. 278
CHRISTMAN, R. J. 66
CIBIS, P. A. 436
CONKLIN, J. E. 289
Crafts, L. W. 321
CRAIG, E. A. 554
CRONBACH, L. J. 498

DALLENBACH, K. M. . 90 145, 386, 502, 519, ...634, 638
de Cserna, C. 515
DENENBERG, V. H. ..309
Dennis, W. 514
Dixon, W. R. 671
Dufresne, G. 514
DUKES, W. F. 283
DU MAS, F. M. 142

EDWARDS, W. ...349, 449
ELAM, C. B. 242
ELIASBERG, W. G. ...647
English, H. B. 510

Faris, R. E. L. 665
Faverge, J. M. 518
FEDDERSEN, W. E. ...456
FERGUSON, T. G. 483
Fiske, D. W. 326
FLANDERS, N. A. 295
Flugel, J. C. 156
Foley, J. P. 669
French, R. L. 324

GELDARD, F. A. 335
Gemelli, A. 330
GERATHEWOHL, S. J. .436
Gibson, J. J. 678
Gleitman, H. 158
Godin, W. 334
GOLDMAN, A. E. 613
Goodman, P. 165
Gray, J. S. 677
GREEN, E. H. 115
GREEN, E. J. 311
Gusdorf, G. 514

HARCUM, E. R. 622
Harlow, H. F. 670
HARPER, R. S. 86
Harper, R. S. .....160, ...517, 674, 676
Harrell, T. W. 673
HARRIMAN, A. E. 465
Harrower, M. R. 516
Hayes, C. 670
Hefferline, R. F. 165
Heinemann, E. G. ...503
HEISE, G. A. 1
Hoch, P. H. 517, 666
Holtzman, W. H. 517
HOVLAND, C. I. 140
Hudgins, C. V. 330
HUMPHREY, C. E. 118, 122
Humphrey, G. 148
Hurvich, L. M. 663

Inhelder, B. 677
I. E. S. 675
Irion, A. L. 658

Janis, I. L. 515
Jeffress, L. A. 153
JONES, F. N. 81
Judd, D. B. 663

Kalinowsky, L. B. 666
KAMIYA, J. 20
KARLIN, L. 564
Karwoski, T. F. 668
Kelly, E. L. 326
Kelly, R. 637
KENSHALO, D. R. ...299
Kinget, C. M. 669
Kisker, G. W. 328
KLOPFER, F. D. 105
Kohler, I. 503
KRUS, D. M. 603

Lacey, J. I. 513
LACEY, O. L. 498
LANE, G. 499
Lawshe, C. H. 677
Lewin, K. 324
LICHTENSTEIN, M. ..554
LIVSON, N. H. 365
Luchins, A. S. 165

MACLEOD, R. B. 465
MacLeod, R. F. 674
Magaret, A. 321
Marcuse, F. L. 668
McGeoch, J. A. 654
McGuire, C. 166
MCHUGH, R. B. 314
McKee, J. P. 333
Mead, M. 661
Meill, R. 512
MERRYMAN, J. G. ...110
Mettler, F. A. 666
MEYER, M. F. ...261, 306
Miller, D. R. 505
Miller, G. A. 661
MONTGOMERY, K. C. .131
Morgan, C. T. 153
Morse, W. C. 671
Mowrer, O. H. 326
Muenzinger, K. F. ..507
Mukerjee, R. 508
Munn, N. L. 316
Murphy, G. 316
Murray, E. 319

NACHMIAS, J. 609
NEIMARK, E. 618
NEWHALL, S. M. 135
Newman, E. B. 654

Ogden, R. M. 148
OZKAPTAN, H. 626

Pascal, G. R. 517
Pear, T. H. 516
Perls, F. 165
PETERS, W. 645
Phillips, L. 672
Piaget, J. 677
Pichot, P. 518
Piéron, H. 518
POLLACK, I. 421
POLLIARD, F. 479
Postman, L. 332

Queener, E. L. 674

Rall, E. P. 672
Rapaport, D. 505
Redl, F. 166
REVERS, W. J. 642
RIOPELLE, A. J. 73
Roback, A. A. 651
ROGERS, L. S. 500
Rohrbacher, H. 673
ROSS, S. 496
Rosvold, H. E. 666

Saldanha, E. L. 163
SALTZMAN, I. J. 593, 618
SANFORD, F. H. 143
Schneider, E. V. 508
Schneiders, A. A. 333
Schneidman, E. S. ...672
Scholtz, W. 515
Sells, S. B. 515
SENDERS, V. L. 215
Sherif, M. 516
SIEGEL, A. I. 301, 626
Sigel, I. 677
SIMMEL, M. L. 229
Simmel, M. L. .....512, ...658, 673
SLACK, C. W. 33
Smith, F. V. 507
SMITH, W. M. 488
Spohn, H. 316
SPROWLS, R. C. 126
Stagner, R. 668
Stagner, R. 328
Steiner, M. E. 516
Stoetzel, J. 518
Stone, C. P. 158, 332
Strang, R. 511
STROMBERG, E. J. 636
Suttell, B. 517
Swanson, G. E. 665
SWEET, A. L. 185

Tait, E. F. 678
Taylor, D. W. 332
TAYLOR, W. M. 124
Teuber, H. L. 661
Thompson, G. G. 510
THOMPSON, J. E. 118
Thurstone, L. L. 673
Tinker, M. A. 671
Tolman, E. C. 675
TYLER, D. W. ..57, 456

Van Breda, H. L. ...674
VANDERPLAS, J. M. ..574
VERSACE, J. 496
von Foerster, H. 661

WAPNER, S. 603
Wattenberg, W. W. ..166
Welford, A. T. 160
WERNER, H. 603
WICKENS, D. D. 315
WILLIAMS, D. C. 144
Wilson, G. F. 516
Winters, E. E. 678
WODINSKY, J. 137
WORCHEL, P. ..519, 598
WORTZ, E. C. 57, 491

Yacorzynski, G. K. ..514
Young, J. Z. 676
YOUNG, P. T. 312

Zangwill, O. L. 316
Zubin, J. 517

SUBJECTS

(Reference in *italic* figures are to reviews.)

Adrenal cortex, *672*.
Adrenalectomy, effect on salt threshold, 465-471.
After-effects, figural, methods for studying, 629-634; kinesthetic, 609-612; movement, 66-72, 365-376, 494-495.
After-images, apparent size of, 449-455.
After-sensation, warmth, 386-396.
Air war, *515*.
American Association for the Advancement of Science, *see* Meetings.
American Philosophical Society, *see* Meetings.
American Psychological Association, *see* Meetings.
Anchoring, rôle in subjective scales of judgment, 199-214.
Animal, monkey, discrimination, 278-282; pigeon, auditory thresholds, 1-19, control of operant responding, 311-312; rat, discriminative learning, 242-250, 491-493, oddity solutions, 137-140, reinforcement, nutritive and non-nutritive, 270-277, 479-482, partial, 57-65, secondary, 456-464, salt thresholds, 465-471; theory of behavior, *675*.
Annual Review of Psychology, 332 f.
Apparatus, anechoic room, 93; auditory masking, 115-117; clinical laboratory, 101; concept-formation, 140-142; constant temperature rooms, 94; differential color-mixer, 312 f.; direction of movement, 289 ff.; electrical latch relay, 299 f.; kinesthetic reaction-time, 309-311; knowledge of results, 483-487; Mariotte's bottles, 387; olfactorium, 94; polygraphic curves, analyzing area of, 118-121; stimulus-generator, 122 f.; skin, resistance, 295-299, temperature, 124 f.; tachistoscope, bright-field, 105-109, electronic, 110-114; timing circuit, 389; Texas laboratory, 90-104.
Apparent movement, activity and, 603-608; effects of prolonged inspection, 66-72, 365-376, 494-495; expansion, 634-636.
Apparent size, after-images, 449-455; brightness, 584-592; color, 283-288; elastic effect, 634-636; figural after-effects, 629-634; finger illusion, 142-143; time-error, 564-573.
Applied psychology, essays, *673*; textbook, *518*.
Associations, organized and unorganized, 574-583; overlearned forward and backward, 622-625.
Audition, cochlear mechanics, 261-269; formulas for cochlear pitches, 306-309; masking, 115-118; thresholds, pigeon, 1-19.
Autocorrelation function, 215 ff.
Autokinetic phenomenon, activity and the, 613-617; effect of prolonged inspection, 365-376.

Bezold, color-mixture effect, 377-385.
Biography, John Dewey, 145-147; Gustav Kafka, 642-644; David Katz, 638-642, portrait facing 519; Karl Marbe, 645-647; Richard Maria Pauli, 647-648; Martin Reymert, 649-650.
Blind, perception of obstacles, 519-553; vertical and horizontal orientation, 598-602.
Book reviews, *148 ff., 316 ff., 503 ff., 651 ff.*

Caloric need, intake of glucose and saccarin related to, 479-482.
Canadian Psychological Association, *see* Meetings.
Cerebral mechanisms, *153 ff.*
Children, 'closure' in performance of, 626-628; concept of chance, *677*; psychology of, *510, 511 f.*
Clinical psychology, prediction of performance in, *326 ff.*; projective techniques, *669 f., 672 f.*; psychodiagnosis, *512 f., 516, 517*; psychotherapy, *165 f.*
'Closure,' 626-628.
Cochlea, pitches created in, 306-309; mechanics, 261-269.
Coin problem, study of thinking, 229-241.
Color, blindness, *319 ff.*; measurement and specification, *663 ff.*; mixture, 312-313, 377-385; size and, 283-288; subjective, 636-637; temperature, relation of Rayleigh ratio to, 135-137; ultraviolet light, 251-260.
Concept-formation, flower designs, 140-142.

Comparative psychology, *158 ff.* *See* Animal.
Conditional perception, *504 f.*
Contours, space between, 436-448.
Contrast, color, 377-385.
Convulsions, *515 f.*
Cybernetics, *661 ff.*

Dates of publication, 638.
Dewey, John *see* Biography.
Discrimination, effect of irrelevant relation, 242-250, 491-493; gustatory, 465-471; hypothesis, secondary reinforcement and, 456-464; movement, 289-294; rate of, monkey, 278-282; quantum theory, 397-408; temporal, 185-198.

Eastern Psychological Association, *see* Meetings.
Ecological cue-validity, 20-32.
Emmert's law, 449 ff.
Errata, 145, 502, 638.
Expansion, illusion of, 634-636.
Experience, frequency and organization as perceptual determinants, 574-583.
Experimental psychology, rôle of theory in, 169-184.

Facial vision, 519-553.
Field-theory, *324 ff.*
Figural after-effects, kinesthetic, 609-612; methodology, 629-634; movement, 66-72, 365-376, 494-495.
Fluorescent spectrum, study of, 253 ff.

Gambling, concept of chance, *677;* probability-preferences in, 349-364.
Gerontology, skill and age, *160 f.*

History, American, psychology, *651 ff.*, A hundred years, 156 ff.
Human engineering, 339 ff.
Hunger, glucose and saccharin related to, 270-277, 479-482.

Illusion, elastic effect, 634-636; finger, 142-143; Müller-Lyer, 629-634; *see* Movement.
Incidental learning, orienting task and, 593-597; rate of stimulus-presentation and, 618-621.
Industrial psychology, *677 f.*
Information, assimilation of, 421-435.
Irrelevant relation, effect of, 242-250, 491-493.
Isomorphism, 376 ff.

Kafka, Gustav, *see* Biography.
Katz, David, *see* Biography.
Kinesthesis, after-effect in, 609-612.
Knowledge of results, device for presenting, 483-487; motor learning, 409-420.

Laboratory, Texas, 90-104, dedication, 169, 335.
Language, psychological structure, 330 ff.
Latency, analysis of variance applied to, 131-135.
Learning, discriminative, monkey, 278-282, irrelevant relation, 242-250, 491-493; encoded information, 421-435; intentional and incidental, 593-597, 618-627; motor, knowledge of results and, 409-420; obstacle perception, 519-553; oddity-problems, 137-140; one-dimensional tracking, 33-44; paralog-figure pairs, 574-583; reinforcement, nutritive and non-nutritive, 270-277, partial, 57-65, secondary, 456-464; textbook, *654 ff.;* transfer of associations, 622-625.
Lighting, handbook of, *675 f.*

Manpower, 339 f.
Marbe, Karl, *see* Biography.
Medicine, relation of psychology to, *514.*
Meetings, American Association for the Advancement of Science, Sec. I, 315; American Philosophical Society, 502; American Psychological Association, 143 f.; Canadian Psychological Association, 144; Eastern Psychological Association, 499 f.; Midwestern Psychological Association, 498 f.; National Academy of Sciences, 501; Rocky Mountain Branch of the American Psychological Association, 500; Society of Experimental Psychologists, 497 f.; Southern Society for Philosophy and Psychology, 498; Western Psychological Association, 637 f.
Mental hygiene, *166 ff.*
Meyer, Adolph, collected papers, *678.*
Mezes Hall, 90-104.
Midwestern Psychological Association, *see* Meetings.
Military psychology, 335-348.
Monkey, visual discrimination, 278-282.
Morals, dynamics of, *508 ff.*
Motor functions, acquisition of response, knowledge of results and, 409-420; perception of movement, 603-608, 613-617; pursuit-movements, 45-56, 472-478; simple tracking, 33-44.

Movement, after-effects, 66-72, 365-376, 494-495; autokinetic, 365-376; discrimination of direction, 289-294; stroboscopic, 66-72, 494-495.
Movies, stereoscopic, 488-491.
Müller-Lyer illusion, 629-634.

National Academy of Sciences, *see* Meetings.
Necrology, *see* Biography.
Neural quantum theory, vision, 397-408.

Obituary, *see* Biography.
Obstacle perception, analysis of, 523 ff.
Oddity-problems, solution by the rat, 137-140.
Olfactometry, test of Elsberg method, 81-85.
Operant, response, stimulus control of, 311 f.; conditioning, auditory thresholds of pigeon, 1-19.
Organization, frequency of experience and, 574-583.
Overlearning, transfer and, 622-25.

Pain, *517 f.*
Pauli, Richard Maria, *see* Biography.
Peace and war, psychology of, *516 f.*
Perception, after-images, 449-455; Bezold effect, 377-385; contours, 436-448; ecological cue-validity, 20-32; modification of colored figures, 86-89; obstacle, 519-553; organization of experience, 574-583; proximity, 20-32; size, color and, 283-288, constancy, 584-592, stereoscopic movies, 488-491; vertical and horizontal, 598-602; time-error, 564-573; visibility-invisibility cycles, 554-563; *see* Figural after-effects, Illusion, Movement.
Perceptual development, motor hypothesis, 301-304.
Personnel selection, 339 ff.
Phenomenology, *674.*
Physiological psychology, *676.*
Pigeon, auditory threshold, 1-19; operant response, 311 f.
Portrait, David Katz, facing page 519.
Practice effects, methods for studying, 629 ff.
Predictability of responses, 220 ff.
Primate development, *670.*
Probability, gambling, 349-364; psychological-mathematical, 126-130.
Proficiency, measurement of, 339 ff.
Projective techniques, *669 f., 672 f.*
Propaganda, *161 ff.*
Proximity, cue value of, 20-32.
Psychodiagnosis, *512 f., 516, 517.*
Psychological, laboratories, development of, 169 f., University of Texas, 90-104; theories, inventory of, 172-182, collected papers, *675.*
Psychophysics, neural quantum theory in vision, 397-408; response sequences, 215-228; subjective scales, 199-214, 304-306.
Psychosurgery, *666 ff.*
Psychotherapy, *165 f.*
Pursuit-movements, 45-56, 472, 478.

Rat, *see* Animal.
Rayleigh ratio, relation to color-temperature, 135-137.
Reaction-time, kinesthetic, 309-311.
Reading, studies in, *671.*
Recognition thresholds, organization of previous experience and, 574-583.
Refraction textbook, *678.*
Reinforcement, random and alternating partial, 57-65; nutritive and non-nutritive, 270-277, 479-482; secondary, 456-464.
Relay, electrical latch, 299 f.
Response sequences, psychophysical, 215-228.
Reymert, Martin, *see* Biography.
Rocky Mountain Branch of the American Psychological Association, *see* Meetings.

Salt, thresholds, 465-471.
Science, theory and, 172-184; method, *163 ff.*
Scotopic sensitivity, distribution in human vision, 73-80.
Secondary reinforcement, discrimination hypothesis, 456-464.
Shape, space between contours, 436-448.
Shock treatment, *666 ff.*
Size, *see* Apparent size.
Skin resistance, circuit for continuous measurement, 295-299.
Social psychology, *665 ff., 674 f.*
Society of Experimental Psychologists, 169, *see* Meetings.
Southern Society for Philosophy and Psychology, 335, *see* Meetings.
Soviet psychology, *658 ff.*
Statistical analysis, gambling, 126-130; variance, correlated, 314 f., latency, 131-135.
Stereoscopic movies, apparent size in, 488-491.
Subjective scales, apparent weight, 304-306; stimulus-similarity and the anchoring of, 199-214.

Systems of psychology, problems of construction, *507 f.*, collected papers of E. C. Tolman, *675.*

Taste, critical frequency for, 496 f.
Texas, University of, psychological laboratories, 90-104.
Textbook, adolescence, *333 f., 668 f., 673 f.*, child, *510 ff.;* comparative psychology, *158 ff.;* industrial psychology, *677 f;* introductory, 316 ff; learning, *654 ff.;* mental hygiene, 166 ff.; memory, *514 f.;* psychology of religion, *168;* psychopathology, *321 ff.;* psychosomatic medicine, *513 f.;* refraction, *678;* social psychology, *168, 665 ff., 674 f.*
Thinking, concept of chance, *677;* experimental study, *148 ff.*, 229-241; organization and pathology, *505 f.*
Time-error, visual size, 564-573.
Tolman, Edward Chase, collected papers, *675.*
Trace theory, 574-583.
Tracking, 33-44, 45-56, 472-478.
Training, military, 339 ff.
Transfer, verbal, 622-625.

Ultraviolet light, color of, 253-260.
Uncertainty functions, 220 ff.

Variance, comparison for corrected samples, 314 f.
VEG scale, 304-306.
Vicariousness, studies in, 603-608, 613-617.
Vision, Bezold effect, 377-385; color of ultraviolet light, 251 f.; fluorescent spectrum, 253 ff.; neural quantum theory, 397-408; scotopic sensitivity, 73-80; 'subjective' color, 636 f.; temporal discrimination, 185-198; visibility-invisibility cycles, 554-563. *See* Discrimination, Illusion, Movement, Perception.

Warmth, after-sensation, 386-396.
Western Psychological Association, *see* Meetings.
World tension, *328 ff.*